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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,528	06/30/2003	Jeffrey Gullicksen	10.0438	8227

22474 7590 10/22/2007  
CLEMENTS WALKER  
1901 ROXBOROUGH ROAD  
SUITE 300  
CHARLOTTE, NC 28211

EXAMINER
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LI, SHI K

ART UNIT	PAPER NUMBER
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2613

MAIL DATE	DELIVERY MODE
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10/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/608,528

Applicant(s)

GULLICKSEN ET AL.

Examiner

Shi K. Li

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                 | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites the limitation "through one of an overhead data channel, out-of-band protocol, service channel, overlay IP network, and combination thereof" in lines 13-14 of the claim. Instant specification teaches on page 11, line 2, "out-of-band protocol, service channel or overlay IP network". However, instant specification does not teach combinations of these methods.

Claim 1 recites the limitation "wherein the line switching is performed between two nodes of the plurality of switching nodes adjacent to the failed span" in lines 14-15 of the claim. Instant specification, as originally filed, does not describe the limitation in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 8 recites the limitation "wherein the line switch is performed between two nodes of the plurality of switching nodes adjacent to a failed span" in lines 9-11 of the claim. Instant

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specification, as originally filed, does not describe the limitation in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 8 recites the limitation “through one of an overhead data channel, out-of-band protocol, service channel, overlay IP network, and combination thereof” in lines 21-22 of the claim. Instant specification teaches on page 11, line 2, “out-of-band protocol, service channel or overlay IP network”. However, instant specification does not teach combinations of these methods.

### *Claim Rejections - 35 USC § 103*

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 3, 5-9, 11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ballintine et al. (U.S. Patent 6,246,667 B1) in view of Lu (U.S. Patent 5,412,652).

Regarding claims 1, 7-9 and 15, Ballintine et al. discloses in FIG. 1 an optical network comprising a plurality of nodes. Ballintine et al. teaches in FIG. 2 controller 220 with memory for storing channel assignment. Ballintine et al. teaches in FIG. 13B that when a span failure occurs, line switching is performed at the two nodes adjacent to the failed span and the controller invokes jumper 1301 to drop traffic from the protection fiber. The difference between Ballintine et al. is that Ballintine et al. does not teach propagating channel assignment data. Lu teaches in FIG. 3B a ring network and in FIG. 6 and FIG. 8 channel assignment table for facilitating protection. Lu teaches in col. 14, line 55 generating the ring table and in line 65 distributing/propagating the table to each network element. Lu teaches in col. 6, line 5 that the

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distribution can use any standard communication protocols. In particular, Lu uses overhead and X.25 as examples (see col. 7, lines 1-6). One of ordinary skill in the art would have been motivated to combine the teaching of Lu with the optical network of Ballintine et al. because the channel assignment table facilitates protection switching. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to distribute channel assignment table, as taught by Lu, in the optical network of Ballintine et al. because the channel assignment table facilitates protection switching.

Regarding claims 3 and 11, Ballintine et al. teaches in col. 3, lines 35-45 SDH digital signal which supports time division multiplexed channels.

Regarding claims 5 and 13, Ballintine et al. teaches in FIG. 10 steps 1001 and 1003 K-bytes for notifying failure.

Regarding claims 6 and 14, Ballintine et al. teaches in FIG. 1 a ring network.

5. Claims 2, 4, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ballintine et al. and Lu as applied to claims 1, 3, 5-9, 11 and 13-15 above, and further in view of De Girolamo et al. (U.S. Patent 7,054,558 B2).

Ballintine et al. and Lu have been discussed above in regard to claim 1, 3, 5-9, 11 and 13-15. The difference between Ballintine et al. and Lu and the claimed invention is that Ballintine et al. and Lu do not teach WDM. However, WDM technology is well known in the art. With WDM technology, a plurality of wavelength channels are carried within a single fiber and dramatically increase transmission capacity. For example, De Girolamo et al. teaches in FIG. 1 a SDH/SONET over WDM architecture where a plurality of SDH/SONET channels, each of different wavelength, are carried in one fiber. One of ordinary skill in the art would have been

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motivated to combine the teaching of De Girolamo et al. with the optical network of Ballintine et al. because SDH/SONET over WDM allows each fiber carrying many wavelength channels and provides high transmission capacity. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use SDH/SONET over WDM, as taught by De Girolamo et al., in the optical network of Ballintine et al. because SDH/SONET over WDM allows each fiber carrying many wavelength channels and provides high transmission capacity.

### *Response to Arguments*

6. Applicant's arguments filed 23 August 2007 have been fully considered but they are not persuasive.

The Applicant argues that page 10, lines 1-2 of instant specification teaches the limitation "wherein the line switching is performed between two nodes of the plurality of switching nodes adjacent to the failed span". The Examiner disagrees. Page 10, line 1-2 of instant specification read "in response to failed span, the switch nodes on either side of the failed span perform (530) a line switching operation as illustrated in the figures". The cited paragraph teaches the switch nodes on either side of the failed span (i.e., adjacent to the failed span) perform a line switching. It does not teach " the line switching is performed between two nodes of the plurality of switching nodes adjacent to the failed span".

7. Applicant's arguments with respect to the art rejection of claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

### *Conclusion*

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (7:30 a.m. - 4:30 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

skl

17 October 2007



Shi K. Li  
Patent Examiner